

EXHIBIT 12
ENGINEERING STATEMENT
IN SUPPORT OF A MINOR CHANGE APPLICATION
TO RELOCATE SITE AND REDUCE POWER

WCME, BRUNSWICK, ME
(FACILITY ID 56570)

900 kHz 0.7 kW-D / 0.026 kW-N Non-directional

DECEMBER 2011

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1. Purpose of Application

James B. Bleikamp, licensee of WCME, Brunswick, Maine, proposes a relocation of the station's main transmitter to a new site 2.98 kilometers (1.85 mile) southwest of the licensed WCME tower, which is no longer available for AM broadcast use. A uniform cross-section base-insulated top-loaded guyed tower and new ground system will be constructed on the new site. Daytime transmitter power will be reduced from a nominal 1.0 kW to 0.7 kW, and nighttime power will be reduced from 0.066 kW to 0.026 kW.

2. Geographical Coordinates, Tower and Site Data

Geographical Coordinates of the proposed tower are:

Tower 1 (Exempt From Registration)

NAD 27:	43° 54' 41.7"N	70° 01' 29.8"W
NAD 83:	43° 54' 42.0"N	70° 01' 28.0"W
Ground Elevation at foundation base:	43.3 m AMSL	(142.4ft)
Length of Steel Radiator	59.4 m	(195 ft)
Overall Elev.:	60.7 m AGL (199 ft)	= 104 m AMSL (341.2 ft)

A new Determination of No Hazard to Air Navigation (based on a site elevation of 146 feet as shown on a USGS topographic quadrangle), was issued by the FAA for the tower on October 5, 2011 under Aeronautical Study No. 2011-ANE-1567-OE and is included as Exhibit 12D. The FAA evaluation confirmed that the tower is exempt from obstruction marking and lighting requirements.

3. Daytime Service Contours

A tabulation of estimated distances to proposed WCME day contours based on M3 assumed conductivity data is provided in Exhibit 13. Exhibit 13A shows proposed 5 mV/m coverage over the principal community of Brunswick CDP, Maine, while Exhibit 13B shows other local communities receiving 2 mV/m and 0.5 mV/m service. A detailed comparison of licensed and proposed service contours is provided in Exhibit 13C. 5 mV/m service will extend to at least 95% of the Brunswick CDP during the day, excluding only the extreme eastern portion which is primarily water/wetlands and sparsely-populated. Detailed information will be provided to the Commission upon request. If necessary, a waiver of Section 73.24(i) of the FCC Rules is requested. As a Class D facility, minimum nighttime coverage of the principal community is not required.

4. Blanketing Contour -- Section 73.24(g) Statement

Figure 12A demonstrates that the proposed WCME daytime 1 V/m "blanketing" contour encompasses the centroid of a single Census Block containing 9 persons, based on 2000 US Census data. Since the estimated population within this contour is far less than 300, no further analysis is necessary. Due to the relatively low power, blanketing interference is not expected to be significant.

However, if problems develop, WCME assumes responsibility to satisfy all reasonable complaints of blanketing interference within the proposed daytime 1 V/m contour. WCME will comply with the requirements of Sections 73.88 and 73.318 (b) and (d) of the Commission's Rules.

5. Antenna System -- Section 73.33, 73.45, 73.189 Statements

A recent site plan showing property boundaries of Lot 5 of the Brunswick Commerce Center with the proposed tower location is provided as Exhibit 12B. 120 equally-spaced copper radials will be buried below grade around the base of the tower and will extend to the "Limit of Clearing" shown on this plan. These radials will extend as far as a quarter-wavelength (83.3 meters) with some truncation as required to clear property lines, setbacks, and wetland limits; however, the minimum length in any directional will exceed 66.4 meters or 71.7 degrees. The radiator will consist of a base insulated 59.4 meter (64.2°) vertical steel portion with 20 degrees of top-loading, to be achieved by bonding segments of the uppermost guy cables to the tower. The effective electrical length of the antenna will be 84.2 degrees with an inverse distance field of 302.1 mV/m/km at 1 kilowatt per FCC "Figure 8". With transmitter output power reduced to 0.7 kW, the proposed inverse field is 252.7 mV/m/km; however, at 1 kW power, the efficiency of this antenna system would exceed the minimum Class D requirement of 282 mV/m/km. A recent aerial photo of the site is provided as Exhibit 12C.

6. Daytime Allocation Study

Potential interference to the following stations has been evaluated:

Facility ID	Call Sign	Location		Freq. (kHz)	Distance (km)	Bearing To (°)	Bearing From (°)
6475	WAMG	Dedham	MA	890	217.2	212.1	31.1
41256	WGHM	Nashua	NH	900	173.8	223.0	42.0

Please note that all other adjacent- and co-channel facilities are beyond the range of consideration, or at bearings that would clearly receive additional protection as a result of the proposed site relocation and decrease in inverse field from 305.8 to 252.7 mV/m -- a 1.7 dB reduction in effective radiated power.

Exhibit 15A shows the predicted groundwave contours of WCME's proposed daytime operation and the pertinent contours of the two stations listed above. All contours were determined by use of the "equivalent distance method" based on estimated M3 ground and seawater conductivities.

The area of overlap between the proposed WCME 0.025 mV/m interference contour and WGHM 0.5 mV/m protected contour will be reduced. Concerning first-adjacent station WAMG, please note that both the present and proposed overlaps occur at the end of a long saltwater path. Proposed WCME 0.25 mV/m interference contour distances towards WAMG are generally reduced from the licensed values, but a small increase is shown at some bearings. This variation

results from minor anomalies in the assumed boundary between M3 conductivity zones of 2 (land) and 5000 (seawater); and therefore is not thought to be significant, as the distance between sites will decrease by less than 1.3 percent but the effective radiated power of WCME will be reduced by 1.7 dB. Note also, that in the 1999 application to construct its present daytime facilities (File No. BP-990111AD), WAMG (then WBPS) agreed to accept received interference from WCME (then WJJB) as discussed in the portion of the application attached as Exhibit 15B, and was granted a waiver for this overlap in consideration of the extended saltwater path. Applicant requests a similar waiver if necessary.

7. Nighttime Operation

The non-directional antenna proposed for daytime operation will also be used at night with reduced power. Exhibit 17A is a tabulation of maximum night radiation limits necessary to protect other domestic and Canadian stations. A reduced antenna power of 26 watts will reduce radiation to 48.71 mV/m/km, meeting the most stringent limit of 49.4 mV/m/km as calculated for the proposed site and tower height.

8. Environmental Considerations

The location of the proposed tower is an industrial park, not considered an environmentally sensitive area. Local approval for the project has been granted. An effective fence with locked gate will be constructed around the base of the proposed tower at a minimum distance of 2 meters, as required to comply with RF power density guidelines for a general population/uncontrolled environment. All station personnel and contractors will be required to follow appropriate safety procedures before any work is commenced on the antenna towers, including reduction in power or discontinuance of operation before any maintenance work is undertaken.

9. Certification

I hereby certify that all statements contained in this application are true to the best of my knowledge. I am an experienced radio broadcast engineer whose qualifications are a matter of record with the Federal Communications Commission, and I hold lifetime General Radiotelephone Operator License, number PG-3-5568.

/s/ Mark D. Humphrey, CPBE
Technical Consultant to WCME
Signed December 7, 2011